

=> file caplus

=> e kim seok/au

E1	2	KIM SEOHWA/AU
E2	2	KIM SEOHYOUNG/AU
E3	133 -->	KIM SEOK/AU
E4	8	KIM SEOK BAE/AU
E5	11	KIM SEOK BEOM/AU
E6	1	KIM SEOK BIN/AU
E7	21	KIM SEOK BONG/AU
E8	2	KIM SEOK BUOM/AU
E9	1	KIM SEOK C/AU
E10	19	KIM SEOK CHAN/AU
E11	39	KIM SEOK CHANG/AU
E12	9	KIM SEOK CHEOL/AU

=> e kim seok soo/au

E1	6	KIM SEOK SIK/AU
E2	2	KIM SEOK SIN/AU
E3	14 -->	KIM SEOK SOO/AU
E4	35	KIM SEOK SOON/AU
E5	26	KIM SEOK SSANG/AU
E6	68	KIM SEOK SU/AU
E7	9	KIM SEOK SUN/AU
E8	15	KIM SEOK TAE/AU
E9	2	KIM SEOK U/AU
E10	10	KIM SEOK WAN/AU
E11	1	KIM SEOK WANG/AU
E12	33	KIM SEOK WON/AU

=> s e3

L1 14 "KIM SEOK SOO"/AU

=> e kim ung jin/au

E1	1	KIM UNG JEON/AU
E2	1	KIM UNG JIM/AU
E3	68 -->	KIM UNG JIN/AU
E4	1	KIM UNG JO/AU
E5	1	KIM UNG JU/AU
E6	1	KIM UNG JUN/AU
E7	2	KIM UNG KWANG/AU
E8	1	KIM UNG KWON/AU
E9	1	KIM UNG KYONG/AU
E10	1	KIM UNG O/AU
E11	1	KIM UNG PHIL/AU
E12	1	KIM UNG POONG/AU

=> s e3

L2 68 "KIM UNG JIN"/AU

=> e lee il yong/au

E1	1	LEE IL YEON/AU
E2	5	LEE IL YEONG/AU
E3	10 -->	LEE IL YONG/AU
E4	6	LEE IL YOUNG/AU
E5	1	LEE IL YUNG/AU
E6	1	LEE ILBOK/AU

E7	46	LEE ILHA/AU
E8	1	LEE ILHANG/AU
E9	2	LEE ILHO/AU
E10	1	LEE ILJAE/AU
E11	3	LEE ILJUNG/AU
E12	1	LEE ILKA MARIA LANDGRAF/AU

=> s e3

L3 10 "LEE IL YONG"/AU

=> e hwang hee won/au

E1	5	HWANG HEE SUN/AU
E2	2	HWANG HEE SUNG/AU
E3	8 -->	HWANG HEE WON/AU
E4	3	HWANG HEE YONG/AU
E5	10	HWANG HEE YOUNG/AU
E6	1	HWANG HEE ZA/AU
E7	17	HWANG HEEDON/AU
E8	9	HWANG HEEJIN/AU
E9	4	HWANG HEEJUN/AU
E10	2	HWANG HEENAM/AU
E11	1	HWANG HEEYOUN/AU
E12	1	HWANG HEEYOUNG/AU

=> s e3

L4 8 "HWANG HEE WON"/AU

=> e jang yong sung/au

E1	91	JANG YONG SUK/AU
E2	10	JANG YONG SUN/AU
E3	6 -->	JANG YONG SUNG/AU
E4	1	JANG YONG UK/AU
E5	9	JANG YONG UN/AU
E6	1	JANG YONG WEON/AU
E7	7	JANG YONG WON/AU
E8	2	JANG YONG WOOK/AU
E9	1	JANG YONG YEUL/AU
E10	1	JANG YONGCAI/AU
E11	3	JANG YONGHEE/AU
E12	1	JANG YONGHO/AU

=> s e3

L5 6 "JANG YONG SUNG"/AU

=> l1 or l2 or l3 or l4 or l5

L6 87 L1 OR L2 OR L3 OR L4 OR L5

=> l6 and cellulose

378802 CELLULOSE

4589 CELLULOSES

379329 CELLULOSE

(CELLULOSE OR CELLULOSES)

L7 19 L6 AND CELLULOSE

=> d l7 1-19 ibib abs

L7 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1448425 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 148:170678

TITLE: Preparation method of hydroxyalkylalkylcellulose for joint compound by reacting alkali metal hydroxide, alkylene oxide and cellulose, and reacting the obtained one with alkali metal hydroxide and alkyl halide

INVENTOR(S): Lee, Joon Soo; So, Jung Ho; Kim, Seok Soo; Park, Jae Bum

PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given  
CODEN: KRXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
KR 2007070975	A	20070704	KR 2005-134044	20051229
PRIORITY APPLN. INFO.:			KR 2005-134044	20051229

AB Provided are a method for preparing a hydroxyalkylalkylcellulose for a joint compound, a hydroxyalkylalkylcellulose for a joint compound prepared by the method which is used to improve flow resistance and to prevent sagging when applied to a join compound, and a joint compound containing the hydroxyalkylalkylcellulose. The method comprises the steps of injecting an alkali metal hydroxide into cellulose in ratio of 0.5-4 mol. to cellulose, stirring the mixture, and injecting an alkylene oxide into the mixture in a ratio of 0.3-1.0 mol. to cellulose to perform first reaction; and injecting an alkali metal hydroxide into the obtained one in a ratio of 0.5-3 mol. to cellulose, dispersing it, and injecting an alkyl halide to it in a ratio of 1-2.5 mol. to the added alkali metal hydroxide to perform second reaction to prepare a hydroxyalkylalkylcellulose. Preferably the first reaction is carried out at 60-110°, and the second reaction is carried out at 50-120°.

L7 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1448424 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 148:170677

TITLE: Preparation method of hydroxyalkyl cellulose

ether by reacting alkali metal hydroxide, alkylene oxide and cellulose with crosslinking agent and mixing the obtained one with surface treating agent

INVENTOR(S): Kim, Seok Soo; Lee, Il Yong; Hwang, Hee Won; Jang, Yong Sung

PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given  
CODEN: KRXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
KR 2007070974	A	20070704	KR 2005-134042	20051229
PRIORITY APPLN. INFO.:			KR 2005-134042	20051229

AB Provided is a method for preparing a hydroxyalkyl cellulose ether whose dissoln. time can be controlled without addnl. additive in a single

processing system. The method comprises the steps of reacting an alkali metal hydroxide, cellulose, ethylene oxide and a crosslinking agent in a ratio of 0.0001-0.1 mol. to cellulose in a reaction solvent for 1-2 h after increasing the temperature to 60-90° for 1-2 h so as to obtain a hydroxyalkyl cellulose ether; and neutralizing and filtering the obtained hydroxyalkyl cellulose ether, mixing 100 parts by weight of the hydroxyalkyl cellulose ether and 0.1-10 parts by weight of a surface treating agent to surface-treat the hydroxyalkyl cellulose ether, and drying and pulverizing it simultaneously.

L7 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1448422 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 148:170676

TITLE: Preparation method of hydroxyalkylalkylcellulose for cement by reacting alkali metal hydroxide, alkylene oxide and cellulose, and reacting the obtained one with alkyl halide

INVENTOR(S): Kim, Seok Soo; Kim, Ung Jin;  
Lee, Il Yong; Hwang, Hee Won;  
Jang, Yong Sung

PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given

CODEN: KRXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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KR 2007070973	A	20070704	KR 2005-134041	20051229
PRIORITY APPLN. INFO.:			KR 2005-134041	20051229

AB Provided are a method for preparing a hydroxyalkylalkylcellulose for cement, and a hydroxyalkylalkylcellulose for cement prepared by the method which is used as a cement mortar additive for improving cohesive force and sagging resistance after the preparation of cement mortar. The method comprises the steps of injecting an alkali metal hydroxide into cellulose in ratio of 0.5-5 mol to cellulose, stirring the mixture, and injecting an alkylene oxide into the mixture in a ratio of 0.1-3 mol to cellulose to react them; and injecting an alkyl halide into the obtained one in a ratio of 1.5-4 mol to cellulose to react them to prepare a hydroxyalkyl cellulose. Preferably the hydroxyalkylalkylcellulose has a degree of substitution of an alkoxy group of 15-35 % and a degree of substitution of a hydroxyalkoxy group of 2-30 %.

L7 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1446313 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 148:170675

TITLE: Method for preparing hydroxyalkyl cellulose with high yield, which comprises steps of treating crushed pulp with alkali metal hydroxide and adding alkylene oxide and alkyl halide thereto to perform reaction, and further adding alkali metal hydroxide and alkyl halide thereto to perform reaction

INVENTOR(S): Kim, Seok Soo; Kim, Ung Jin;  
Lee, Il Yong; Hwang, Hee Won;  
Jang, Yong Sung

PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given  
 CODEN: KRXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Korean  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2007070550	A	20070704	KR 2005-133205	20051229
PRIORITY APPLN. INFO.:			KR 2005-133205	20051229

AB Provided is a method for preparing hydroxyalkyl cellulose, which shows an improved reaction efficiency in the reaction materials, reduces introduction of the reaction materials into waste water, and increases the yield of hydroxyalkyl cellulose to 60% or higher. The method for preparing hydroxyalkyl cellulose via the reaction of cellulose with an etherifying agent comprises the steps of: introducing an alkali metal hydroxide to cellulose in a molar ratio of 0.5-4 mol per mol. of the cellulose, agitating the mixture, introducing an alkylene oxide thereto in a molar ratio of 0.5-3 mol per mol. of the cellulose, further introducing an alkyl halide thereto in an amount of 20-95 wt% of the total amount of the alkyl halide, and carrying out a reaction; and introducing an alkali metal hydroxide to the reaction mixture in an amount of 1-4 mol per mol. of the cellulose, dispersing the mixture, further introducing an alkyl halide thereto in an amount of 5-8- wt% of the total amount of the alkyl halide, and carrying out a reaction.

L7 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2007:761912 CAPLUS <<LOGINID::20090115>>  
 DOCUMENT NUMBER: 147:145099  
 TITLE: Method for preparation of hydroxyalkyl alkyl cellulose ethers with high yield  
 INVENTOR(S): Kim, Seok Soo; Kim, Ung-Jin;  
Lee, Il Yong; Hwang, Hee Won;  
Jang, Yong Sung  
 PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea  
 SOURCE: PCT Int. Appl., 17pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007078015	A1	20070712	WO 2005-KR4663	20051230
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

EP 1969012 A1 20080917 EP 2005-844817 20051230  
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR  
US 20080242852 A1 20081002 US 2006-574331 20060331  
PRIORITY APPLN. INFO.: WO 2005-KR4663 W 20051230

AB The present invention relates to a method for preparing hydroxyalkyl alkyl cellulose with high yield, by treating finely ground pulp with an alkali metal hydroxide at room temperature, reacting it with an alkylene oxide and an alkyl halide, and then adding an alkali metal hydroxide and an alkyl halide thereto. The method of the present invention is highly economical and also environment-friendly because waste of the reactants can be greatly reduced.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:929374 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 146:144523  
TITLE: Method for preparing highly substituted hydroxyalkylalkylcellulose in a short time  
INVENTOR(S): Kim, Seok Soo; So, Jung Ho; Lee, Sang Ku; Lee, Il Yong; Cho, Myung Seung; Yun, Kyoung In  
PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea  
SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given  
CODEN: KRXXA7  
DOCUMENT TYPE: Patent  
LANGUAGE: Korean  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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KR 2005060397	A	20050622	KR 2003-92006	20031216
PRIORITY APPLN. INFO.:			KR 2003-92006	20031216

AB A method includes introducing alkali metal hydroxides in portions at controlled amts. and controlling the mixing ratio of the diluent gas. A method comprises adding an alkali metal hydroxide to cellulose in molar ratio 0.5-4.0 with stirring, introducing a diluent gas and adding the total amount of an alkylene oxide to perform a first reaction, adding an alkali metal hydroxide in molar ratio 1.0-4.0 with dispersing, and introducing the total amount of an alkyl halide to perform a second reaction.

L7 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:558235 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 145:47431  
TITLE: Improved preparation of highly enzymatic resistant hydroxyalkyl cellulose derivatives  
INVENTOR(S): Kim, Seok Soo; So, Jung Ho; Lee, Il Yong; Hwang, Hee Won  
PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea  
SOURCE: PCT Int. Appl., 21 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2006062268	A1	20060615	WO 2004-KR3335	20041217
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
KR 2006063431	A	20060612	KR 2004-102603	20041207
EP 1828252	A1	20070905	EP 2004-808466	20041217
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 101076544	A	20071121	CN 2004-80044559	20041217
JP 2008523198	T	20080703	JP 2007-545354	20041217
PRIORITY APPLN. INFO.:			KR 2004-102603	A 20041207
			WO 2004-KR3335	W 20041217

AB In particular, hydroxyalkyl cellulose derivs. are prepared by reacting cellulose and ethylene oxide in the presence of alkali metal hydroxide, where the reaction between cellulose and ethylene oxide is performed in the presence of iso-PrOH azeotropic solvent in a horizontally agitated reactor, where the ethylene oxide is supplied via 2 steps, thus resulting in a 2-step reaction, and the amount of alkali metal hydroxide remaining after the first reaction is controlled, enabling to provide hydroxyalkyl cellulose derivs. having improved enzymic resistance and turbidity and to remarkably decrease the solvent usage to have economical and environmental advantages.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:570932 CAPLUS <<LOGINID::20090115>>  
 DOCUMENT NUMBER: 143:79867  
 TITLE: Preparation of fine powdered cellulose ethers  
 INVENTOR(S): Kim, Seok Soo; So, Jung Ho; Lee, Sang Ku; Lee, Il Yong; Cho, Myung Seung; Yun, Kyoung In  
 PATENT ASSIGNEE(S): Samsung Fine Chemicals, Co. Ltd., S. Korea  
 SOURCE: PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005058970	A1	20050630	WO 2003-KR2874	20031229
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,				

BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,  
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

KR 2005060396	A	20050622	KR 2003-92005	20031216
AU 2003289565	A1	20050705	AU 2003-289565	20031229
EP 1694710	A1	20060830	EP 2003-781035	20031229

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK

CN 1886428	A	20061227	CN 2003-80110851	20031229
JP 2007528425	T	20071011	JP 2005-512203	20031229
US 20070093656	A1	20070426	US 2006-582743	20060613

PRIORITY APPLN. INFO.: KR 2003-92005 A 20031216  
 WO 2003-KR2874 W 20031229

AB Fine powdered cellulose ethers are prepared in a cost-effective manner having high running efficiency by subjecting pulverized cellulose to alkanization using alkalifying agent, such as caustic soda, mixing the alkanized cellulose with etherifying agent selected from alkyleneoxide and alkyl halide, heating the reaction mix. from 40 to 60° for 10-60 min, from 45-75° for 60-180 min, and from 80-90° for 60-180 min, and dilute gas, such as di-Me ether and di-Et ether, can be injected into the mix. system before the addition of the etherifying agent. Thus, cellulose alkanized with caustic soda was reacted with ethylene oxide and Me halide in the presence of di-Me ether dilute gas to receive cellulose Et Me ether.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:343086 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 141:192078

TITLE: Solubilization of dialdehyde cellulose by hot water

AUTHOR(S): Kim, Ung-Jin; Wada, Masahisa; Kuga, Shigenori

CORPORATE SOURCE: Graduate School of Agricultural and Life Sciences, Department of Biomaterials Science, The University of Tokyo, Bunkyo-ku, Tokyo, 113-8657, Japan

SOURCE: Carbohydrate Polymers (2004), 56(1), 7-10  
 CODEN: CAPOD8; ISSN: 0144-8617

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors found that dialdehyde cellulose (DAC) prepared by periodate oxidation of cellulose dissolves in hot water, and examined the extent of decomposition during solubilization. The d.p. and aldehyde content of DAC did not show significant decreases during treatments of 80° for 4 h or 100° for 1 h, but underwent increasingly severe degradation at elevated temps. and longer times. The aqueous DAC solution is possibly useful for mild aqueous processes utilizing aldehyde reactivity.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:56846 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 141:278952

TITLE: Long-periodicity structure in cellulose fiber



AUTHOR(S): Nishiyama, Yoshiharu; Kim, Dae-Young; Kim, Ung-Jin  
CORPORATE SOURCE: University of Tokyo, Japan  
SOURCE: Cellulose Communications (2003), 10(4), 165-169  
CODEN: CCOMFD; ISSN: 1342-730X  
PUBLISHER: Serurosu Gakkai  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: Japanese

AB A review. Periodical distribution of accessible region along microfibrils in ramie was detected by using small angle neutron scattering (SANS). Labile hydrogen atoms were replaced by deuterium atoms, in water-accessible disordered regions of the fibers, in order to increase the neutron scattering contrast between the disordered and crystalline regions. A meridional Bragg reflection, corresponding to a longitudinal periodicity of 150 nm, was observed when scattering collected from hydrogenated and deuterated dry ramie fibers was subtracted. The ramie fibers were also subjected to electron microscopy, acid hydrolysis, gel permeation chromatog. and viscosity studies. The Level-Off d.p. (LODP) of the hydrolyzed samples matched exactly the periodicity observed in the diffraction studies. The weight loss related to the LODP was only about 1.5%, and thus the microfibrils can be considered to have 4-5 disordered residues every 300 residues consistent with the SANS result. Mercerized and regenerated cellulose both gave a 14 nm long-range periodicity indicating that similar kinetics of crystallization, different from natural cellulose, is governing the structure.

L7 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:369927 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 139:86607

TITLE: Periodic Disorder along Ramie Cellulose Microfibrils

AUTHOR(S): Nishiyama, Yoshiharu; Kim, Ung-Jin; Kim, Dae-Young; Katsumata, Kyoko S.; May, Roland P.; Langan, Paul

CORPORATE SOURCE: School of Agricultural and Life Science, University of Tokyo, Tokyo, 113-8657, Japan

SOURCE: Biomacromolecules (2003), 4(4), 1013-1017  
CODEN: BOMAF6; ISSN: 1525-7797

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Small angle neutron scattering studies have been carried out on cellulose fibers from ramie and Populus maximowicii (cotton wood). Labile hydrogen atoms were replaced by deuterium atoms, in water-accessible disordered regions of the fibers, to increase the neutron scattering contrast between the disordered and crystalline regions. A meridional Bragg reflection, corresponding to a longitudinal periodicity of 150 nm, was observed when scattering collected from hydrogenated and deuterated dry ramie fibers was subtracted. No Bragg reflection was observed with the cotton wood fibers, probably because of lower orientation of the microfibrils in the cell wall. The ramie fibers were then subjected to electron microscopy, acid hydrolysis, gel permeation chromatog., and viscosity studies. The leveling off d.p. (LODP) of the hydrolyzed samples matched exactly the periodicity observed in the diffraction studies. The weight

loss related to the LODP was only about 1.5%, and thus, the microfibrils can be considered to have 4-5 disordered residues every 300 residues.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:550174 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 138:25940

TITLE: Functionalization of cellulose by periodate oxidation

AUTHOR(S): Kim, Ung-Jin; Kuga, Shigenori

CORPORATE SOURCE: Department of Biomaterials Science, Graduate School of Agricultural and Life Science, University of Tokyo, Tokyo, Japan

SOURCE: Cellulose Communications (2002), 9(2), 69-75

CODEN: CCOMFD; ISSN: 1342-730X

PUBLISHER: Serurosu Gakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Periodate oxidation of glycol group is a well-known, useful reaction for characterization and derivatization of polysaccharides, but it has not been effectively utilized in derivatization of cellulose. We here present several features of this reaction with native and regenerated cellulose, and propose its novel applications for preparing new cellulose derivs. for mol. separation based on polyelectrolyte grafting.

L7 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:324657 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 137:137067

TITLE: Ion-exchange separation of proteins by polyallylamine-grafted cellulose gel

AUTHOR(S): Kim, Ung-Jin; Kuga, Shigenori

CORPORATE SOURCE: Department of Biomaterials Science, The University of Tokyo, Graduate School of Agricultural and Life Sciences, Bunkyo-ku, Tokyo, 113-8657, Japan

SOURCE: Journal of Chromatography, A (2002), 955(2), 191-196

CODEN: JCRAEY; ISSN: 0021-9673

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A cellulose-based anion exchanger bearing water-soluble polycation was tested for separation of proteins. The exchanger was obtained by partial oxidation of cellulose gel by aqueous NaIO<sub>4</sub> followed by Schiff base formation with polyallylamine (PAA, mol. mass 5000). The retention behavior of proteins for three grades of PAA-cellulose gels, with amino group contents of 0.35, 0.59 and 0.96 mmol/g cellulose, was examined at several pH values and compared with that for conventional DEAE-cellulose gel with amino group content of 1.07 mmol/g cellulose. The retention of proteins by PAA-cellulose gels was remarkably greater than that for the DEAE-cellulose gel. Pairs of proteins having close isoelec. points and mol. masses (human and bovine serum albumins;  $\beta$ -lactoglobulin A and B) could be separated by the PAA-cellulose gel columns. Such efficiency can be ascribed to high local d. of grafted polyallylamine, in contrast to the random and sparse charge distribution in DEAE-cellulose.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:66408 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 136:331038

TITLE: Polyallylamine-grafted cellulose gel as

high-capacity anion-exchanger  
AUTHOR(S): Kim, Ung-Jin; Kuga, Shigenori  
CORPORATE SOURCE: Graduate School of Agricultural and Life Sciences,  
Department of Biomaterials Science, The University of  
Tokyo, Bunkyo-ku, Tokyo, 113-8657, Japan  
SOURCE: Journal of Chromatography, A (2002), 946(1-2), 283-289  
CODEN: JCRAEY; ISSN: 0021-9673  
PUBLISHER: Elsevier Science B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB A new cellulose-based anion-exchanger was prepared by grafting polyallylamine onto cellulose. The material was obtained by partial oxidation of a size-exclusion grade cellulose gel by aqueous NaIO<sub>4</sub>, forming dialdehyde cellulose, followed by Schiff base formation with a polyallylamine (PAA, mol. mass 5000) and subsequent reduction for stabilization. Three grades of PAA-cellulose gels, with amino group contents of 0.78, 1.01 and 1.28 mmol/g cellulose, were examined for their ionic interaction with mono- and divalent carboxylic acids at pH 2.5-5.5. While the retention factor for monovalent acids was nearly proportional to the amino group content of the gel, that for divalent acids was remarkably greater for the PAA-cellulose gel than for the conventional diethylaminoethyl (DEAE) cellulose gel bearing more amino groups (1.97 mmol/g cellulose). Such high capacity can be explained by the high local d. of amino groups on grafted PAA, in contrast to the random and sparse charge distribution in conventional exchangers.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:4026 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 134:368422

TITLE: Reactive interaction of aromatic amines with  
dialdehyde cellulose gel

AUTHOR(S): Kim, Ung-Jin; Kuga, Shigenori

CORPORATE SOURCE: Department of Biomaterials Science, Graduate School of  
Agricultural and Life Sciences, Tokyo, 113-8657, Japan

SOURCE: Cellulose (Dordrecht, Netherlands) (2000), 7(3),  
287-297

CODEN: CELLE8; ISSN: 0969-0239

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new chromatog. method was developed for separation of amines based on their interaction with aldehyde groups in stationary phase. With the expectation of specific interaction with aldehyde groups through imine formation (Schiff base), dialdehyde groups were introduced to a com. cellulose (I) packing by periodate oxidation, and the eluting behavior of various aromatic amines was examined. Primary amines with acid dissociation consts. (pK<sub>a</sub>) >6 showed no delay at pHs of 4.0-5.5, indicating a lack of interaction because of complete protonation. Primary amines with pK<sub>a</sub> <6 showed remarkable delays according to the amount of aldehyde groups on I. The delay was dependent on the pH of the eluent. The amines with pK<sub>a</sub> of 4-5.3 eluted faster at lower pH, apparently because of the change in proportion of free and protonated species. Amines with pK<sub>a</sub> <3.4 also showed delays, but they eluted slower at lower pH. The latter behavior can be ascribed to the change in the ratio of free/protonated species of imines formed. A certain degree of steric effect was also noted, i.e., compds. with a primary amino group adjacent to bulky substituents (ortho

compds.) showed weaker interaction with aldehyde groups than meta- and para-isomers.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:507049 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 133:254067

TITLE: Periodate oxidation of crystalline cellulose

AUTHOR(S): Kim, Ung-Jin; Kuga, Shigenori; Wada, Masahisa; Okano, Takeshi; Kondo, Tetsuo

CORPORATE SOURCE: Department of Biomaterials Science, Graduate School of Agricultural and Life Sciences, Tokyo, 113-8657, Japan

SOURCE: Biomacromolecules (2000), 1(3), 488-492

CODEN: BOMAF6; ISSN: 1525-7797

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Conversion of 1,2-dihydroxyl groups to dialdehyde by periodate oxidation is a useful method of derivatizing polysaccharides but is not extensively used in derivatization of cellulose (I) because of complications caused by the crystalline nature of I. To understand the influence of I crystallinity on this reaction, it was investigated how the periodate oxidation proceeds with a highly crystalline I of the marine alga *Cladophora* sp.

The crystallinity of the oxidized I, determined by x-ray diffraction, decreased according to the oxidation level. The half-height widths of equatorial diffraction peaks were nearly unchanged. The solid-state <sup>13</sup>C-NMR spectra did not show peaks corresponding to aldehyde groups, but solution <sup>13</sup>C-NMR spectra showed the presence of dicarboxylic groups after subsequent oxidation by Na chlorite. TEM showed that microfibrils of *Cladophora* tended to be bent and more flexible than the original sample. Gold labeling of the aldehyde groups, mediated by thiosemicarbazide derivatization, revealed a highly uneven distribution of dialdehyde groups. When treated by 50% (w/v) H<sub>2</sub>SO<sub>4</sub>, partially oxidized *Cladophora* I gave many short fragments of microfibril. These features indicate that the periodate oxidation proceeds by forming dialdehyde groups in longitudinally spaced, band-like domains.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:7473 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 132:160605

TITLE: Modification of cellulose column packing by periodate oxidation

AUTHOR(S): Kim, Ung-Jin; Shigenori, Kuga

CORPORATE SOURCE: Department of Biomaterials Science, Graduate School of Agriculture & Life Sciences, The University of Tokyo, Japan

SOURCE: Chromatography (1999), 20(4), 322-323

CODEN: CHROFZ; ISSN: 1342-8284

PUBLISHER: Society for Chromatographic Sciences

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB The authors produced new types of modified cellulose packing from a com. product (Cellulofine 700SF) by periodate oxidation (dialdehyde cellulose, DAC) and subsequent chlorite oxidation (dicarboxyl cellulose, DCC) and examined eluting behavior of various aromatic amines. While primary amines with acid dissociation constant (pK<sub>a</sub>) >6 and

secondary/tertiary amines showed no delay on DAC column at pHs of 4.0-5.5, primary amines with  $pK_a < 6$  showed remarkable delays according to the amount of aldehyde groups on cellulose. These features can be ascribed to imine (Schiff base) formation of primary amines with aldehyde groups in the stationary phase. Ion exchange behavior of the DCC column showed strong pH dependence for amines with  $pK_a > 3$ . The capacity factor of DCC at low pHs was about four times of that of ordinary carboxylated cellulose with similar carboxyl content, indicating certain anomaly in ion exchange behavior due to pair-wise distribution of carboxyl.

L7 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:91399 CAPLUS <<LOGINID::20090115>>  
TITLE: Impact of native cellulose structure on crystallinity of cellulose-derived materials  
AUTHOR(S): Kuga, Shigenori; Kim, Ung-Jin; Kim, Dae-Young; Wada, Masahisa; Okano, Takeshi  
CORPORATE SOURCE: Department of Biomaterials Science, Graduate School of Agriculture and Life Sciences, The University of Tokyo, Bunkyo, 113-8657, Japan  
SOURCE: Book of Abstracts, 217th ACS National Meeting, Anaheim, Calif., March 21-25 (1999), CELL-070. American Chemical Society: Washington, D. C. CODEN: 67GHA6  
DOCUMENT TYPE: Conference; Meeting Abstract  
LANGUAGE: English

AB In the heterogeneous derivatization of cellulose, the crystalline nature of starting cellulose is more or less inherited by the product. We found that the dialdehyde cellulose (DAC) formed by periodate oxidation of an algal cellulose retained high crystallinity up to high degrees of conversion. The ex-Cladophora DAC gave an X-ray pattern virtually identical to that of original cellulose I. This anomaly implies certain unusual phenomena underlying the process of DAC formation from crystalline cellulose. Another instance is pyrolytic graphitization of crystalline cellulose. The formation of highly crystalline graphite from Cladophora cellulose at above 2000C indicates the existence of structure memory in the amorphous carbon formed in the early stage of pyrolysis.

L7 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:91370 CAPLUS <<LOGINID::20090115>>  
TITLE: Anomaly in periodate oxidation of crystalline cellulose  
AUTHOR(S): Kim, Ung-Jin; Kuga, Shigenori; Wada, Masahisa; Okano, Takeshi  
CORPORATE SOURCE: Department of Biomaterials Science, Graduate School of Agriculture and Life Sciences, The University of Tokyo, Bunkyo, 113-8657, Japan  
SOURCE: Book of Abstracts, 217th ACS National Meeting, Anaheim, Calif., March 21-25 (1999), CELL-041. American Chemical Society: Washington, D. C. CODEN: 67GHA6  
DOCUMENT TYPE: Conference; Meeting Abstract  
LANGUAGE: English

AB Various native cellulose samples were oxidized by aqueous sodium periodate to form dialdehyde cellulose. While the materials with low or moderate crystallinity became amorphous with increasing degree of oxidation, an algal cellulose retained high crystallinity up to high degrees of conversion, giving an X-ray pattern virtually identical to

that of original cellulose I. The CP-MAS <sup>13</sup>C NMR also showed a high crystallinity. Isothermal calorimetry of the reaction revealed remarkably small heat of reaction for cellulose in comparison to those of ethylene glycol and cyclodextrin, implying certain anomaly in periodate oxidation of crystalline cellulose.

=> "mixed cellulose ether"

875967 "MIXED"  
378802 "CELLULOSE"  
4589 "CELLULOSES"  
379329 "CELLULOSE"  
( "CELLULOSE" OR "CELLULOSES" )  
551793 "ETHER"  
161230 "ETHERS"  
616540 "ETHER"  
( "ETHER" OR "ETHERS" )

L8 68 "MIXED CELLULOSE ETHER"  
( "MIXED" (W) "CELLULOSE" (W) "ETHER" )

=> hydroxyalkylalkylcellulose or "alkyl hydroxyalkyl cellulose" or  
alkylhydroxyalkylcellulose

13 HYDROXYALKYLALKYLCELLULOSE  
1 HYDROXYALKYLALKYLCELLULOSES  
14 HYDROXYALKYLALKYLCELLULOSE  
( HYDROXYALKYLALKYLCELLULOSE OR HYDROXYALKYLALKYLCELLULOSES )  
625294 "ALKYL"  
6839 "ALKYLS"  
628393 "ALKYL"  
( "ALKYL" OR "ALKYLS" )  
27071 "HYDROXYALKYL"  
31 "HYDROXYALKYLS"  
27090 "HYDROXYALKYL"  
( "HYDROXYALKYL" OR "HYDROXYALKYLS" )  
378802 "CELLULOSE"  
4589 "CELLULOSES"  
379329 "CELLULOSE"  
( "CELLULOSE" OR "CELLULOSES" )  
27 "ALKYL HYDROXYALKYL CELLULOSE"  
( "ALKYL" (W) "HYDROXYALKYL" (W) "CELLULOSE" )  
4 ALKYLHYDROXYALKYLCELLULOSE  
1 ALKYLHYDROXYALKYLCELLULOSES  
4 ALKYLHYDROXYALKYLCELLULOSE  
( ALKYLHYDROXYALKYLCELLULOSE OR ALKYLHYDROXYALKYLCELLULOSES )

L9 44 HYDROXYALKYLALKYLCELLULOSE OR "ALKYL HYDROXYALKYL CELLULOSE" OR  
ALKYLHYDROXYALKYLCELLULOSE

=> 18 or 19

L10 112 L8 OR L9

=> 110 and (halide or chloride or bromide)

162225 HALIDE  
134017 HALIDES  
233276 HALIDE  
( HALIDE OR HALIDES )  
1250317 CHLORIDE  
167812 CHLORIDES  
1327383 CHLORIDE  
( CHLORIDE OR CHLORIDES )

305259 BROMIDE  
33738 BROMIDES  
320791 BROMIDE

(BROMIDE OR BROMIDES)

L11 25 L10 AND (HALIDE OR CHLORIDE OR BROMIDE)

=> d l11 1-25 ibib abs

L11 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1448425 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 148:170678

TITLE: Preparation method of  
hydroxyalkylalkylcellulose for joint compound  
by reacting alkali metal hydroxide, alkylene oxide and  
cellulose, and reacting the obtained one with alkali  
metal hydroxide and alkyl halide

INVENTOR(S): Lee, Joon Soo; So, Jung Ho; Kim, Seok Soo; Park, Jae  
Bum

PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given  
CODEN: KRXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
KR 2007070975	A	20070704	KR 2005-134044	20051229
PRIORITY APPLN. INFO.:			KR 2005-134044	20051229

AB Provided are a method for preparing a hydroxyalkylalkylcellulose  
for a joint compound, a hydroxyalkylalkylcellulose for a joint  
compound prepared by the method which is used to improve flow resistance and  
to prevent sagging when applied to a joint compound, and a joint compound  
containing the hydroxyalkylalkylcellulose. The method comprises the  
steps of injecting an alkali metal hydroxide into cellulose in ratio of  
0.5-4 mol. to cellulose, stirring the mixture, and injecting an alkylene  
oxide into the mixture in a ratio of 0.3-1.0 mol. to cellulose to perform  
first reaction; and injecting an alkali metal hydroxide into the obtained  
one in a ratio of 0.5-3 mol. to cellulose, dispersing it, and injecting an  
alkyl halide to it in a ratio of 1-2.5 mol. to the added alkali  
metal hydroxide to perform second reaction to prepare a  
hydroxyalkylalkylcellulose. Preferably the first reaction is  
carried out at 60-110°, and the second reaction is carried out at  
50-120°.

L11 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1448422 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 148:170676

TITLE: Preparation method of  
hydroxyalkylalkylcellulose for cement by  
reacting alkali metal hydroxide, alkylene oxide and  
cellulose, and reacting the obtained one with alkyl  
halide

INVENTOR(S): Kim, Seok Soo; Kim, Ung Jin; Lee, Il Yong; Hwang, Hee  
Won; Jang, Yong Sung

PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given  
CODEN: KRXXA7

DOCUMENT TYPE: Patent  
LANGUAGE: Korean  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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KR 2007070973	A	20070704	KR 2005-134041	20051229
PRIORITY APPLN. INFO.:			KR 2005-134041	20051229

AB Provided are a method for preparing a hydroxyalkylalkylcellulose for cement, and a hydroxyalkylalkylcellulose for cement prepared by the method which is used as a cement mortar additive for improving cohesive force and sagging resistance after the preparation of cement mortar. The method comprises the steps of injecting an alkali metal hydroxide into cellulose in ratio of 0.5-5 mol to cellulose, stirring the mixture, and injecting an alkylene oxide into the mixture in a ratio of 0.1-3 mol to cellulose to react them; and injecting an alkyl halide into the obtained one in a ratio of 1.5-4 mol to cellulose to react them to prepare a hydroxyalkyl cellulose. Preferably the hydroxyalkylalkylcellulose has a degree of substitution of an alkoxy group of 15-35 % and a degree of substitution of a hydroxyalkoxy group of 2-30 %.

L11 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2006:929374 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 146:144523  
TITLE: Method for preparing highly substituted  
hydroxyalkylalkylcellulose in a short time  
INVENTOR(S): Kim, Seok Soo; So, Jung Ho; Lee, Sang Ku; Lee, Il  
Yong; Cho, Myung Seung; Yun, Kyoung In  
PATENT ASSIGNEE(S): Samsung Fine Chemicals Co., Ltd., S. Korea  
SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given  
CODEN: KRXXA7  
DOCUMENT TYPE: Patent  
LANGUAGE: Korean  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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KR 2005060397	A	20050622	KR 2003-92006	20031216
PRIORITY APPLN. INFO.:			KR 2003-92006	20031216

AB A method includes introducing alkali metal hydroxides in portions at controlled amts. and controlling the mixing ratio of the diluent gas. A method comprises adding an alkali metal hydroxide to cellulose in molar ratio 0.5-4.0 with stirring, introducing a diluent gas and adding the total amount of an alkylene oxide to perform a first reaction, adding an alkali metal hydroxide in molar ratio 1.0-4.0 with dispersing, and introducing the total amount of an alkyl halide to perform a second reaction.

L11 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2004:1036435 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 142:11592  
TITLE: Controlled release press-coated formulations with a core and a coating comprising water-soluble active agents  
INVENTOR(S): Vilkov, Zalman  
PATENT ASSIGNEE(S): Alpharma, Inc., USA  
SOURCE: U.S. Pat. Appl. Publ., 18 pp.



CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040241234	A1	20041202	US 2003-452754	20030602
AU 2004245029	A1	20041216	AU 2004-245029	20040602
AU 2004245029	B2	20070830		
CA 2527926	A1	20041216	CA 2004-2527926	20040602
WO 2004108082	A2	20041216	WO 2004-US17089	20040602
WO 2004108082	A3	20050324		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CN 1832730	A	20060913	CN 2004-80022503	20040602
EP 1750680	A2	20070214	EP 2004-753831	20040602

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

IN 2006CN00007	A	20070817	IN 2006-CN7	20060102
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PRIORITY APPLN. INFO.:	US 2003-452754	A	20030602
	WO 2004-US17089	W	20040602

AB The present invention relates to a press-coat formulation comprising a core composition comprising a water-soluble active agent and a waxy material and a

coating composition comprising the active agent and a polymer, wherein the coating composition is press-coated onto the core.

L11 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:76046 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 140:147924

TITLE: Cellulose derivatives with gel-like rheological properties

INVENTOR(S): Schlesiger, Hartwig; Kull, Arne Henning; Klohr, Erik-Andreas

PATENT ASSIGNEE(S): Wolff Cellulosics GmbH & Co. KG, Germany

SOURCE: Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1384727	A1	20040128	EP 2003-16027	20030715
EP 1384727	B1	20080702		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

DE 10233788	A1	20040205	DE 2002-10233788	20020725
AT 399798	T	20080715	AT 2003-16027	20030715
ES 2306828	T3	20081116	ES 2003-16027	20030715
CA 2435805	A1	20040125	CA 2003-2435805	20030722
MX 2003PA06601	A	20040212	MX 2003-PA6601	20030723
US 20040127700	A1	20040701	US 2003-626338	20030723
US 6958393	B2	20051025		
BR 2003002446	A	20040824	BR 2003-2446	20030723
KR 2004010362	A	20040131	KR 2003-50868	20030724
RU 2321595	C2	20080410	RU 2003-123018	20030724
AU 2003221390	A1	20040212	AU 2003-221390	20030725
CN 1475507	A	20040218	CN 2003-133187	20030725
CN 1319993	C	20070606		
JP 2004059922	A	20040226	JP 2003-201870	20030725
HK 1071148	A1	20080206	HK 2004-104224	20040611
PRIORITY APPLN. INFO.:			DE 2002-10233788	A 20020725

AB Irreversible crosslinked alkyl hydroxyalkyl cellulose derivs., especially Me hydroxyethyl cellulose with controlled solubility and viscosity (gelatinous rheol. characteristics at room temperature) are manufactured by alkylating with alkyl halides and hydroxyalkylating with alkylene oxides of cellulose (pulp, cotton linter) in suspension, in the presence of alkali (NaOH) with simultaneous or subsequent crosslinking. For example, 17.7 kg cellulose pulp was treated under N with 52.9 kg Me<sub>2</sub>O and 2.0 equiv MeCl, 2.2 equiv NaOH and 0.001 equiv epichlorohydrin in 2.5 l dimethoxyethane was added; the mixture was stirred for 25 min at 25°, 0.66 equiv ethylene oxide was added in portions; the mixture was heated to 82° and stirred for 60 min at that temperature, 2.0 equiv MeCl was added; and the whole was stirred for 12 min at that temperature to give crosslinked hydroxyethyl Me cellulose with Me substitution degree 1.42, hydroxyethyl substitution degree 0.43.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2003:77807 CAPLUS <<LOGINID::20090115>>  
 DOCUMENT NUMBER: 138:108513  
 TITLE: Process for preparing alkyl hydroxyalkyl cellulose  
 INVENTOR(S): Dannhorn, Wolfgang; Klohr, Erik-Andreas; Kowollik, Martin; Schlesiger, Hartwig; Pannek, Joern-Bernd  
 PATENT ASSIGNEE(S): Wolff Walsrode Aktiengesellschaft, Germany  
 SOURCE: Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 1279680	A2	20030129	EP 2002-14927	20020708
EP 1279680	A3	20030312		
EP 1279680	B1	20061025		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
DE 10135464	A1	20030206	DE 2001-10135464	20010720
AT 343598	T	20061115	AT 2002-14927	20020708
ES 2275783	T3	20070616	ES 2002-14927	20020708

JP 2003096102	A	20030403	JP 2002-204035	20020712
CA 2393920	A1	20030120	CA 2002-2393920	20020717
US 20030065165	A1	20030403	US 2002-197070	20020717
US 7402668	B2	20080722		
BR 2002002777	A	20030513	BR 2002-2777	20020718
MX 2002PA07129	A	20050217	MX 2002-PA7129	20020719
RU 2309162	C2	20071027	RU 2002-119196	20020719
HK 1053663	A1	20061027	HK 2003-105918	20030819

PRIORITY APPLN. INFO.:

DE 2001-10135464 A 20010720

AB Alkyl hydroxyalkyl cellulose derivs., especially

Me hydroxyethyl cellulose and Me hydroxypropyl cellulose with controlled solubility and viscosity are manufactured by alkylation with alkyl halides and hydroxyalkylation with alkylene oxides of cellulose (pulp, cotton linters) in suspension, in the presence of alkali (NaOH) and an organic solvent, especially Me<sub>2</sub>O. For example, 257 g cellulose linters (moisture 5.2%) was treated under N with 145 g Me<sub>2</sub>O and 1.57 equiv MeCl, 2.0 equiv NaOH (50% in H<sub>2</sub>O) was added, the mixture was stirred for 60 min at 25°, 0.8 equiv propylene oxide was added in portions, the mixture was heated to 85° and stirred for 120 min at that temperature, 0.3 equiv NaOH and 2.46 equiv MeCl was added and the whole was stirred for 120 min at 85° to give hydroxypropyl Me cellulose with substitution degree 1.45, molar hydroxypropyl substitution 0.41 and viscosity 9200 (1% aqueous solution), vs. 1.40, 0.36 and 7200 for hydroxypropyl Me cellulose prepared by similar procedure in which NaOH was added in 1 portion.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:906317 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 138:5766

TITLE: Process for preparing alkyl hydroxyalkyl cellulose ethers

INVENTOR(S): Schneider, Hans P.; Merryweather, Stephen J.; Beer, Wolfgang H.

PATENT ASSIGNEE(S): Dow Global Technologies Inc., USA

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2002094882	A1	20021128	WO 2002-US7822	20020304
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, YU, ZA, ZM, ZW				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002255747	A1	20021203	AU 2002-255747	20020304
EP 1401873	A1	20040331	EP 2002-725164	20020304
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1507453	A	20040623	CN 2002-809363	20020304

US 20040102625 A1 20040527 US 2003-468959 20030822  
 US 7005515 B2 20060228  
 PRIORITY APPLN. INFO.: US 2001-292496P P 20010521  
 WO 2002-US7822 W 20020304  
 AB The process comprises (a) alkalizing cellulose to form alkali cellulose,  
 (b) reacting alkali cellulose with an alkyl halide (e.g.,  
 chloromethane) until an alkyl cellulose ether with D.S.(alkyl) value  
 0.7-2.5. is attained, (c) removing excess alkyl halide from the  
 reaction mixture, and (d) reacting the alkyl cellulose ether with an  
 alkylene oxide (e.g., propylene oxide) in a liquid suspending agent (e.g.,  
 isopropanol) to give an alkyl hydroxyalkyl  
cellulose ether (e.g., hydroxypropyl Me cellulose ether) with  
 D.S.(alkyl) 0.7-2.5, MS (hydroxyalkyl) 0.03-2.0 and ≥15%  
 hydroxyalkyl groups capped with an alkyl group.  
 REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2002:138926 CAPLUS <<LOGINID::20090115>>  
 DOCUMENT NUMBER: 136:185595  
 TITLE: Process for the preparation of alkyl  
hydroxyalkyl cellulose  
 INVENTOR(S): Dannhorn, Wolfgang; Schlesiger, Hartwig; Pannek,  
 Joern-Bernd; Weissbach, Gerolf  
 PATENT ASSIGNEE(S): Wolff Walsrode A.-G., Germany  
 SOURCE: Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1180526	A1	20020220	EP 2001-117733	20010730
EP 1180526	B1	20031008		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 10038978	A1	20020221	DE 2000-10038978	20000810
AT 251645	T	20031015	AT 2001-117733	20010730
ES 2204788	T3	20040501	ES 2001-117733	20010730
JP 2002201201	A	20020719	JP 2001-234595	20010802
US 20020038018	A1	20020328	US 2001-923011	20010803
US 6891034	B2	20050510		
KR 769423	B1	20071022	KR 2001-46964	20010803
CA 2354739	A1	20020210	CA 2001-2354739	20010807
CN 1338474	A	20020306	CN 2001-125527	20010808
CN 1186356	C	20050126		
MX 2001PA08023	A	20020408	MX 2001-PA8023	20010808
NO 2001003886	A	20020211	NO 2001-3886	20010809
NO 318679	B1	20050425		
BR 2001003278	A	20020326	BR 2001-3278	20010809
HK 1044782	A1	20050909	HK 2002-106441	20020830
PRIORITY APPLN. INFO.:			DE 2000-10038978	A 20000810

AB Alkyl hydroxyalkyl cellulose derivs., especially  
 Me hydroxyethyl and Me hydroxypropyl cellulose with defined degree of  
 substitution, were manufactured by (a) alkalizing the cellulose with aqueous  
 alkali  
 solution in the presence of a suspension agent, e.g., Me2O containing  
 calculated amount

of an alkyl halide, (b) alkoxyating alkali cellulose with alkylene oxide at >65°, (c) introducing an addnl. amount of alkyl halide (≥0.2 equiv alkyl halide per anhydroglucose unit), (d) optionally continuing alkoxylation at >65°, and (e) isolating and purifying the title products. For example, adding 268 g Me<sub>2</sub>O containing MeCl (2.89 equiv per anhydroglucose unit) to a reactor containing 260 g cotton linters (6.6% moisture) under N, spraying the stirred mixture with 2.6 equiv NaOH (50% aqueous solution), stirring

the mixture for 60 min at 25°, adding 0.8 equiv propylene oxide, heating for 120 min at 85°, adding 1.44 equiv MeCl and heating the whole for addnl. 120 min at 85° gave hydroxypropyl Me cellulose (HPMC) with Me group substitution degree 1.52, hydroxypropyl group substitution degree 0.31 and viscosity 60,400 mPa·s (2% aqueous solution, 20°). Etherifying the cellulose with the same total amount of MeCl and propylene oxide (4.33 equiv) where the entire amount of MeCl was added in 1 step (at the start) gave HPMC having Me group substitution degree 1.58, hydroxypropyl group substitution degree 0.21 and viscosity 29,000 mPa·s.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:254359 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 133:18957

TITLE: Properties of aqueous propylmethylcellulose solutions and conditions of the formation of physical thermally reversible gels from them

AUTHOR(S): Bochek, A. M.; Nud'ga, L. A.; Petrova, V. A.; Petropavlovskii, G. A.

CORPORATE SOURCE: Inst. Vysokomolekulyarnykh Soedinenii, RAN, St. Petersburg, Russia

SOURCE: Zhurnal Prikladnoi Khimii (Sankt-Peterburg) (2000), 73(2), 304-308  
CODEN: ZPKHAB; ISSN: 0044-4618

PUBLISHER: Nauka

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB A mixed cellulose ether, Me Pr cellulose, with various Pr group content was synthesized from Me cellulose. Rheol. properties of aqueous Me cellulose and Me Pr cellulose solns. were studied under phase separation conditions using turbidity spectroscopy. Effect of Pr group is studied on the gel formation in the aqueous cellulose ether solns.

L11 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:49294 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 126:119252

ORIGINAL REFERENCE NO.: 126:23009a, 23012a

TITLE: Alkyl hydroxyalkyl cellulose ethers containing sulfoalkyl groups

INVENTOR(S): Bartz, Uwe; Donges, Reinhard; Klehr, Heiner

PATENT ASSIGNEE(S): Hoechst A.-G., Germany

SOURCE: U.S., 9 pp., Cont.-in-part of U.S. 5,395,930.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5591844	A	19970107	US 1994-345912	19941128
US 5395930	A	19950307	US 1993-72736	19930607
PRIORITY APPLN. INFO.:			DE 1992-4218738	A 19920606
			US 1993-72736	A2 19930607

AB Alkyl hydroxyalkyl cellulose ethers which contain a sulfoalkyl group as a further substituent, a process for their preparation, and construction material mixts. which are based on gypsum, hydrated lime, or cement and contain alkyl hydroxyalkyl cellulose ethers containing sulfoalkyl groups are described. The ethers are prepared by a process comprising: (a) alkalizing the cellulose; (b) adding a compound transferring OH groups; (c) if necessary, adding further alkalizing agent; and (d) adding a compound transferring alkyl groups; wherein (e) the addition of the compound transferring sulfoalkyl groups is already made during process step (a), but at the latest before process step (d). Thus, ground cellulose pulp was alkalized with aqueous NaOH, and aqueous Na vinylsulfonate solution was added and mixed. The mixture was evacuated and blanketed with N<sub>2</sub>, and a mixture of Me chloride and ethylene oxide was injected for etherification for 60 min at 80-90°. The Me hydroxyethyl sulfoethyl cellulose (I) was washed with hot water, dried, and finely ground. Construction material mixts. containing I had good water retention capacity.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1991:80543 CAPLUS <<LOGINID::20090115>>  
 DOCUMENT NUMBER: 114:80543  
 ORIGINAL REFERENCE NO.: 114:13743a,13746a  
 TITLE: Preparation of mixed cellulose ethers as soil improvers  
 INVENTOR(S): Wurz, Erich  
 PATENT ASSIGNEE(S): Brigl und Bergmeister Papierfabrik G.m.b.H., Austria  
 SOURCE: Eur. Pat. Appl., 5 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 374125	A2	19900620	EP 1989-890319	19891213
EP 374125	A3	19900822		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 8803075	A	19911215	AT 1988-3075	19881216
AT 394859	B	19920710		
PRIORITY APPLN. INFO.:			AT 1988-3075	A 19881216
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The substituted mixed cellulose ethers I are prepared as soil improvers. I are substituted with amino and/or sulfo

groups, with a degree of substitution of 0.1-0.6 and 0.2-0.6/mol glucose, resp. I also contain a solubility-enhancing spacer. I are optionally mixed with urea. A mixture of 400 kg cellulose, 330 kg water, 0.05 kg polyglycol ether, 100 g CuSO<sub>4</sub>, 100 g MnSO<sub>4</sub>, and 20 kg diallyldimethylammonium chloride was milled for 1 h, followed by addition of a solution of 240 kg KOH in 150 L water and of 140 kg ClCH<sub>2</sub>CO<sub>2</sub>Na. After addition of 80 kg Na methallylsulfonate, 12 kg K persulfate, and 4 kg urea, the mixture was treated with 100 kg CMC and 200 kg KH<sub>2</sub>PO<sub>4</sub> 2 h later to give a soil improver.

L11 ANSWER 12 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:414717 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 113:14717  
ORIGINAL REFERENCE NO.: 113:2455a,2458a  
TITLE: Silver halide photographic material having double-coated backing layer containing hydroxyalkyl-alkyl cellulose acetate phthalate to improve adhesion  
INVENTOR(S): Kawamoto, Fumio  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 01307743	A	19891212	JP 1988-138975	19880606
PRIORITY APPLN. INFO.:			JP 1988-138975	19880606

AB The photog. material has (1)  $\geq 1$  Ag halide emulsion layer(s) on a polyester support and (2) the 1st backing layer containing alkyl cellulose and the 2nd layer containing hydroxyalkyl-alkyl cellulose acetate phthalate on the other side of the support. The double layer configuration provides excellent backing characteristics including good antihalation effect and good adhesion. The backing can be removed easily at the processing stage. Thus, a motion picture color photog. film having poly(ethylene terephthalate) support showed the mentioned advantages when it was provided with the 1st backing layers comprising acetyl cellulose (degree of acetylation 56%) and the overcoated 2nd backing layer containing hydroxypropyl-Me cellulose acetate phthalate (acetyl residue 8%, Me group 15%, hydroxypropyl group 4%, phthalyl 36%) and cellulose acetate hexahydrophthalate (acetyl residue 23%, hexahydrophthalyl group 36%).

L11 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:219065 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 112:219065  
ORIGINAL REFERENCE NO.: 112:36989a,36992a  
TITLE: Preparation and uses of mixed cellulose ethers containing hydrophobic radicals  
INVENTOR(S): Sau, Arjun C.  
PATENT ASSIGNEE(S): Aqualon Co., USA  
SOURCE: U.S., 7 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4904772	A	19900227	US 1988-252315	19881003
CA 1329590	C	19940517	CA 1989-614201	19890928
EP 362769	A1	19900411	EP 1989-118244	19891002
EP 362769	B1	19950405		
R: AT, BE, DE, FR, GB, IT, NL, SE				
AT 120764	T	19950415	AT 1989-118244	19891002
BR 8905021	A	19900508	BR 1989-5021	19891003
JP 02169601	A	19900629	JP 1989-258629	19891003
JP 2950868	B2	19990920		

PRIORITY APPLN. INFO.: US 1988-252315 A 19881003

AB H2O-soluble cellulose (I) ethers, having (A)  $\geq 1$  substituent selected from a group of hydroxyalkyl or Me and (B)  $\geq 2$  hydrophobic C6-20 radicals, provided one of the hydrophobic radicals has a C chain length that is  $\geq 2$  C atoms longer than that of the other hydrophobic radical, and the hydrophobic radicals are contained in a total amount so that the I ethers are less than 1 weight% soluble in H2O. The I ethers are useful in the manufacture of aqueous protective coatings, e.g., latex paints. Thus, a slurry of I in a mixture of tert-BuOH, Me2CO, and iso-PrOH was mixed with aqueous NaOH and reacted with ethylene oxide to form hydroxyethyl I, which was then then reacted with octyl and cetyl bromides, cooled, neutralized with HNO3, and worked up to give C8/C16 mixed hydrophobe hydroxyethyl I having 1% Brookfield viscosity (at 30 rpm) 140 cPs. The polymers were used in preparing paints having superior color development properties and improved spatter resistance.

L11 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1987:642655 CAPLUS <<LOGINID::20090115>>

DOCUMENT NUMBER: 107:242655

ORIGINAL REFERENCE NO.: 107:38919a

TITLE: Topical pharmaceutical gels containing hydroxyalkyl cellulose or alkyl hydroxyalkyl cellulose for wound healing

INVENTOR(S): Ambrosch, Walter; Schneider, Michael

PATENT ASSIGNEE(S): Goedecke A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 3 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3614095	A1	19871029	DE 1986-3614095	19860425
JP 62254763	A	19871106	JP 1987-97656	19870422
DK 8702090	A	19871026	DK 1987-2090	19870424
FI 8701811	A	19871026	FI 1987-1811	19870424
NO 8701720	A	19871026	NO 1987-1720	19870424
AU 8771964	A	19871029	AU 1987-71964	19870424
EP 247362	A2	19871202	EP 1987-105999	19870424
EP 247362	A3	19881026		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
HU 43783	A2	19871228	HU 1987-1804	19870424
ZA 8702934	A	19871230	ZA 1987-2934	19870424
CN 87103139	A	19871118	CN 1987-103139	19870425



PRIORITY APPLN. INFO.: DE 1986-3614095 A 19860425  
 AB Topical pharmaceutical hydrogels, which promote wound healing, contain a C1-C4-alkyl hydroxy-C1-C4-alkyl cellulose or a hydroxy-C1-C4-alkyl cellulose as a carrier. A pharmaceutical hydrogel with K<sup>+</sup> and Ca<sup>2+</sup> as active ingredients contained CaCl<sub>2</sub> 30 mmol (0.44%) and KCl 40 mmol (0.30%) in a mixture of Me hydroxyethyl cellulose 4.00, 70% sorbitol 2.80, PHB ester 0.20, and water to 100%. The gel had a pH of 4.0 and a viscosity of 40 Pa.

L11 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1986:196913 CAPLUS <<LOGINID::20090115>>  
 DOCUMENT NUMBER: 104:196913  
 ORIGINAL REFERENCE NO.: 104:30989a,30992a  
 TITLE: Silver halide photographic materials  
 INVENTOR(S): Himmelmann, Wolfgang; Nittel, Fritz; Meyer, Rudolf; Rosenhahn, Lothar  
 PATENT ASSIGNEE(S): Agfa-Gevaert A.-G., Fed. Rep. Ger.  
 SOURCE: Eur. Pat. Appl., 46 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 167081	A2	19860108	EP 1985-107790	19850624
EP 167081	A3	19870318		
EP 167081	B1	19880727		
R: BE, DE, FR, GB				
DE 3424893	A1	19860206	DE 1984-3424893	19840706
US 4603102	A	19860729	US 1985-748965	19850626
JP 61032050	A	19860214	JP 1985-146862	19850705
JP 05019696	B	19930317		

PRIORITY APPLN. INFO.: DE 1984-3424893 A 19840706  
 AB Photog. materials are described which contain a nonadhesive, transparent outer layer composed of a hydrophilic colloid containing particles of a hydroxyalkyl alkyl cellulosedicarboxylic acid semiester with a particle size of 0.5-8 µm and a particle size distribution of ≤±2 µm. Coating solns. containing these particles are stable at pH values <7 and photog. materials containing these layers, after processing, possess a high smoothness and a high transparency. Thus, a color neg. film was coated with a composition containing 15% aqueous gelatin 400, distilled water 2800, 4% aqueous C8F17SO3-[NEt4]<sup>+</sup> 80, a dispersion of hydroxypropyl Me cellulose hexahydrophthalate semiester (particle size 1-4 µm) in gelatin 50, and a 10% aqueous solution of a hardener 2000 g at 50 g/m<sup>2</sup>. The resultant film showed only a 10% adhesion to another film, 150-200 g force for extraction from a film cartridge, a yellow stain of 0-5%, a granularity of 1.8 (S-D-value), an 81% reflectance before processing, and a 99% reflectance after processing (smoothness) vs. 10%, 200-250 g, 0-8% 2.2, 85%, and 87%, resp., for a control containing poly(Me methacrylate) particles (0.3-8 µm).

L11 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1986:90799 CAPLUS <<LOGINID::20090115>>  
 DOCUMENT NUMBER: 104:90799  
 ORIGINAL REFERENCE NO.: 104:14395a,14398a  
 TITLE: Water-soluble cellulose mixed ethers

INVENTOR(S): Felcht, Utz Hellmuth; Buchberger, Gerhard  
 PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.  
 SOURCE: Ger. Offen., 21 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3417952	A1	19851121	DE 1984-3417952	19840515
EP 161607	A2	19851121	EP 1985-105491	19850506
EP 161607	A3	19861203		
EP 161607	B1	19910529		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
AT 63924	T	19910615	AT 1985-105491	19850506
US 4650863	A	19870317	US 1985-732733	19850510
FI 8501885	A	19851116	FI 1985-1885	19850513
ES 543164	A2	19860101	ES 1985-543164	19850514
BR 8502271	A	19860114	BR 1985-2271	19850514
CA 1238317	A1	19880621	CA 1985-481443	19850514
JP 60255801	A	19851217	JP 1985-101664	19850515
JP 06051722	B	19940706		

PRIORITY APPLN. INFO.: DE 1984-3417952 A 19840515  
 EP 1985-105491 A 19850506

AB Etherification of alkalized cellulose with alkylene oxide followed by MeCl or monochloroacetic acid in organic solvent gave the title products. Thus, a mixture of spruce cellulose pulp 3, Me2O 9, 28% NaOH 2.48, and ethylene oxide (I) 0.19 part was stirred for 30 min at 70°, distilled to remove residual Me2O and excess I, the residue was treated with 2.3 parts Me2O, and 5.64 parts 49.5% NaOH, stirred for 30 min at 20-40° and methylated with 4.4 parts MeCl for 1.5 h at 85° to give soluble hydroxyethyl Me cellulose with 1.99 Me substitution degree (SD) and 0.18 hydroxyethyl mol. SD.

L11 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1984:193725 CAPLUS <<LOGINID::20090115>>  
 DOCUMENT NUMBER: 100:193725  
 ORIGINAL REFERENCE NO.: 100:29455a,29458a  
 TITLE: Water-washable remover for disperse varnishes  
 INVENTOR(S): Drobny, Frantisek; Kovacikova, Eleonora  
 PATENT ASSIGNEE(S): Czech.  
 SOURCE: Czech., 4 pp.  
 CODEN: CZXXA9  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Slovak  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 210847	B1	19820129	CS 1979-4360	19790626
			CS 1979-4360	19790626

PRIORITY APPLN. INFO.:  
 AB The described thixotropic composition swells coatings of disperse varnishes so that they can be removed by rinsing with water. It consists of CH2Cl2 [75-09-2] 5095, paraffin (m.p. 50-4°) 0.1-3, C1-3-alkyl hydroxyalkyl cellulose 0.1-10, C1-3 alc. 4-30, xylene [1330-20-7] 0.5-10, polyglycol ether of stearic acid (I) (m.p.

35-45°) 0.1-5, oxyethylated stearic ester (II) containing 45-55% oxirane 0.1-5, BzONa [532-32-1] <1, C2-3-alkyl polyglycol phosphate neutralized with HOCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> <3, and aqueous NH<sub>3</sub> <0.5 parts. An exemplary remover of coatings from building facades comprised Et hydroxyethyl cellulose [9004-58-4] 1, CH<sub>2</sub>Cl<sub>2</sub> 80, EtOH [64-17-5] 6, xylene 9, aqueous NH<sub>3</sub> 0.1, I 0.2, II 0.6, paraffin 3, and BzONa 0.1 parts.

L11 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1983:579532 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 99:179532  
ORIGINAL REFERENCE NO.: 99:27527a,27530a  
TITLE: Concentration of potassium-containing ores  
INVENTOR(S): Titkov, S. N.; Larin, A. M.; Ryzhova, M. M.;  
Mirgorodskaya, N. A.  
PATENT ASSIGNEE(S): All-Union Scientific-Research Institute of Halurgy,  
USSR  
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy,  
Tovarnye Znaki 1983, (33), 25-6.  
CODEN: URXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1039576	A1	19830907	SU 1981-3416240	19811211

PRIORITY APPLN. INFO.: SU 1981-3416240 19811211

AB The process consists of crushing, mixing the ore in a saturated salt solution, conditioning with a modifier, adding a cationic collecting agent and frothing agent, and flotation of KCl. The extraction of KCl into the concentrate is increased by adding a conditioning modifier consisting of mixed cellulose ethers containing tertiary amino groups and/or groups of quaternary ammonium chloride bases derived from glycidylalkylamines and hydroxyethyl, hydroxypropyl, Me, and(or) carboxy-containing ethers of cellulose.

L11 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1975:45466 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 82:45466  
ORIGINAL REFERENCE NO.: 82:7245a,7248a  
TITLE: Nonionic cellulose ether  
INVENTOR(S): Lindenfors, Sven; Westberg, Sven O. J.  
PATENT ASSIGNEE(S): MoDoKemi AB  
SOURCE: Ger. Offen., 27 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2412014	A1	19741003	DE 1974-2412014	19740313
DE 2412014	C3	19790315		
SE 403782	B	19780904	SE 1973-3582	19730314
SE 403782	C	19781214		
NO 137278	B	19771024	NO 1974-811	19740307

US 3926951	A	19751216	US 1974-450132	19740311
FI 56847	B	19791231	FI 1974-735	19740311
FI 56847	C	19800410		
NL 7403267	A	19740917	NL 1974-3267	19740312
NL 162660	B	19800115		
NL 162660	C	19800616		
DD 112275	A5	19750405	DD 1974-177142	19740312
BE 812233	A1	19740701	BE 1974-141946	19740313
JP 49128084	A	19741207	JP 1974-29572	19740313
AT 7402103	A	19750815	AT 1974-2103	19740313
AT 329589	B	19760525		
GB 1453382	A	19761020	GB 1974-11276	19740313
IT 1009296	B	19761210	IT 1974-67748	19740313
CA 1010857	A1	19770524	CA 1974-194933	19740313
SU 1105118	A3	19840723	SU 1974-2005714	19740313
FR 2221463	A1	19741011	FR 1974-8752	19740314
PL 89900	B1	19761231	PL 1974-169548	19740314
CH 614220	A5	19791115	CH 1974-3585	19740314
CS 228901	B2	19840514	CS 1974-1864	19740314
PRIORITY APPLN. INFO.:			SE 1973-3582	A 19730314

AB The etherification of mercerized cellulose (I) with alkylene oxides and alkyl halides at 70-120° gave alkyl hydroxyalkyl cellulose with high clarity, low gel content, and high flocculation temperature interval. Thus, alkali cellulose manufactured by mercerization of I with 20% NaOH for 30 min at room temperature and pressing at 2.5 factor was treated with EtCl 1.5, propylene oxide 1.4, and ethylene oxide 0.3 part, autoclaved for 30 min at 70°, kept for 3 hr, suspended in warm H<sub>2</sub>O at .apprx.95°, neutralized with AcOH, filtered, and dried to give ethyl hydroxyethyl hydroxypropyl cellulose [53795-28-1] with 0.25, 0.7, and 2.0 substitution degree resp., 3,560 cP viscosity at 20°, 96.9% clarity, 63.5° flocculation temperature, and 0% fiber content.

L11 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1972:114141 CAPLUS <<LOGINID::20090115>>  
 DOCUMENT NUMBER: 76:114141  
 ORIGINAL REFERENCE NO.: 76:18439a,18442a  
 TITLE: Homopolymerization or copolymerization of vinyl chloride in aqueous suspension  
 INVENTOR(S): Brinkmann, Horst; Hoffmann, Kurt  
 PATENT ASSIGNEE(S): Chemische Werke Huels A.-G.  
 SOURCE: Brit., 4 pp.  
 CODEN: BRXXAA  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 1257517		19711222	GB	19691128
AB PVC [9002-86-2]				
having narrow particle size distribution, rapid plasticizer absorption, and few specks (fisheyes) was prepared by solution polymerization in the presence of .geq. 2 water-soluble cellulose ether suspension agents, which consisted of .geq. 40% hydroxypropyl cellulose (I) [9004-64-2] having degree of substitution 1-4.6 hydroxypropyl groups/glucose unit, a <u>mixed cellulose ether</u>				

, and optionally an acrylic polymer. Thus, a mixture of H<sub>2</sub>O 68,000, I [degree of substitution 3, viscosity (5% aqueous solution) 220 centipoises] 56, methyl hydroxypropyl cellulose (II) [9004-65-3] [viscosity (5%) 1200 centipoises] 56, and acrylic acid-tridecyl acrylate copolymer (III) [34363-97-8] 32, and dilauroyl peroxide 96 g was treated with 40,000 g vinyl chloride at 53.deg. to yield PVC having number of specks (Leuchs test) after 3 min rolling = 11, 5 min = 5, and 10 min = 1. A similar PVC prepared without II and III had number of specks after 3 min = 14, 5 min = 11, and 10 min = 2.

L11 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1965:9852 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 62:9852  
ORIGINAL REFERENCE NO.: 62:1841f-g  
TITLE: Water-soluble mixed cellulose allyl ethers  
PATENT ASSIGNEE(S): Kalle A.-G.  
SOURCE: 5 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 973952		19641104	GB 1961-26606	19610721
US 3251825		19660517	US 1961-124374	19610717
PRIORITY APPLN. INFO.:		DE		19600721

AB A H<sub>2</sub>O-soluble mixed cellulose ether that is soluble at room temperature and is capable of being cross-linked due to its allyl content was prepared. Thus, cellulose was first treated in an autoclave with NaOH and ethylene oxide at 20-30°. MeCl is introduced under pressure and the reaction is continued at 85°. The excess MeCl is drawn off and more NaOH and also allyl chloride are added. Pressure and heat (80°) complete the reaction to give a product containing hydroxyethyl groups 0.8, Me groups 0.8, and allyl groups 0.03 mole. This product forms insol. films when cross-linked. They are useful in the paint, adhesive, and textile industry.

L11 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1943:22231 CAPLUS <<LOGINID::20090115>>  
DOCUMENT NUMBER: 37:22231  
ORIGINAL REFERENCE NO.: 37:3597c-e  
TITLE: Production of mixed cellulose ethers from inexpensive raw materials  
AUTHOR(S): Dashkevich, B. N.  
SOURCE: Trudy Leningrad. Inst. Sovet. Torgovli (1939), (No. 2), 3-7  
From: Khim. Referat. Zhur. 4, No. 2, 101(1941).  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

AB D. attempted to obtain halogen derivs. of hydrocarbons from inexpensive raw material and to combine them with alkali cellulose without isolating the halides. Producer-gas wood tar containing approx. 12% of the phenol-cresol fraction was dehydrated by dissolving it in Me<sub>2</sub>CO or CHCl<sub>3</sub>, and drying over CaCl<sub>2</sub> for 3 days; the dried (distilled or undistd.) tar was treated with dry Cl without a solvent until no more Cl was absorbed. Chlorination added 5-6% of Cl to distilled tar and 50-60% to undistd. tar. The reaction between alkali cellulose and chlorinated tar (in 1:1 and 1:2

ratios) was carried out in the presence of an excess of dry alkali in sealed tubes heated in an oil bath. Best results were obtained by heating at 105-30° for 6 hrs. The products were brown and soluble in pyridine. Films were obtained from the pyridine solution

L11 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1935:26332 CAPLUS  
DOCUMENT NUMBER: 29:26332  
ORIGINAL REFERENCE NO.: 29:3429c-f  
TITLE: Relief printing forms  
PATENT ASSIGNEE(S): I. G. Farbenindustrie AG  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 420548		19341204	GB 1933-22891	19330816
AB	A relief printing surface is made by pressing a dry or slightly wet gelatin or like relief, which may be prepared photographically, into a mass formed of or containing a polymerization product of 1 or more unsatd. organic compds. containing a vinyl group but not containing a conjugated system of C:C double linkages, or a condensation product thereof with an aldehyde or ketone. The product may be a polyacrylic acid derivative, e. g., an ester, nitrile or salt, a polyvinyl <u>halide</u> or acetate, polystyrene, a mixed polymerization product or a condensation product, e. g., of polyvinyl alc. and butyraldehyde or the like. Softening agents, pigments, dyes, filling agents, etc., or highly polymeric substances, e. g., polyglycols, albuminous substances, cellulose esters or ethers or <u>mixed cellulose ethers</u> or ether esters may be added. Sheets or foils of over-chlorinated polyvinyl <u>chloride</u> (cf. Brit. 401,200) may be used and the foils may be fastened before or after impression to a metal or other backing. In examples, a gelatin relief prepared photographically from a dichromated gelatin film, or a gelatin relief produced in a Ag <u>halide</u> emulsion film by a hardening development, is supported on a plane metal plate and, while dry or slightly wet, is impressed in a hydraulic press into a foil made of polyvinyl <u>chloride</u> containing 65% Cl at 80-85° and 100-120 atmospheric; a relief is impressed into a foil made of a mixed polymerization product from polyvinyl <u>chloride</u> and polyacrylic acid Me ester at 70-80° and 150 atmospheric for 5 min. To prevent sticking, the reliefs may be treated with a solution of paraffin wax.			

L11 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1933:3772 CAPLUS  
DOCUMENT NUMBER: 27:3772  
ORIGINAL REFERENCE NO.: 27:413c  
TITLE: Mixed cellulose ethers  
INVENTOR(S): Hagedorn, Max; Rossbach, Erich  
PATENT ASSIGNEE(S): I. G. Farbenindustrie AG  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 1877856		19320920	US 1930-422673	19300122

AB In forming ethers such as propylhydroxyethyl cellulose, etc., alkali cellulose is reacted on with an alkyl halide such as PrCl or benzyl chloride in the presence of an unsubstituted alkylene oxide such as ethylene oxide. Several examples are given. Cf. C. A. 26, 4718.

L11 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1931:5107 CAPLUS  
DOCUMENT NUMBER: 25:5107  
ORIGINAL REFERENCE NO.: 25:592d-e  
TITLE: Cellulose ethers  
PATENT ASSIGNEE(S): I. G. Farbenindustrie AG  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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FR 686598		19300728	FR	19291213

AB Mixed cellulose ethers are made by the reaction of a mixture of a simple or substituted alkyl halide, saturated or not, and ethylene oxide or one of its homologs with alkali cellulose in the presence of a diluent and a catalyst. Examples are given of the preparation of benzyloxyethylcellulose from C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>Cl, ethylene oxide and alkali cellulose, and of propyloxyethylcellulose, PrCl being used.

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(FILE 'HOME' ENTERED AT 10:57:45 ON 15 JAN 2009)

FILE 'CAPLUS' ENTERED AT 10:57:56 ON 15 JAN 2009

E KIM SEOK/AU  
E KIM SEOK SOO/AU  
L1 14 S E3  
E KIM UNG JIN/AU  
L2 68 S E3  
E LEE IL YONG/AU  
L3 10 S E3  
E HWANG HEE WON/AU  
L4 8 S E3  
E JANG YONG SUNG/AU  
L5 6 S E3  
L6 87 L1 OR L2 OR L3 OR L4 OR L5  
L7 19 L6 AND CELLULOSE  
L8 68 "MIXED CELLULOSE ETHER"  
L9 44 HYDROXYALKYLALKYLCELLULOSE OR "ALKYL HYDROXYALKYL CELLULOSE" OR  
L10 112 L8 OR L9  
L11 25 L10 AND (HALIDE OR CHLORIDE OR BROMIDE)

FILE 'STNGUIDE' ENTERED AT 11:01:11 ON 15 JAN 2009